

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:)	Examiner: To be Assigned
)	
Louis E. BURTON, et al.)	Art Unit: To be Assigned
)	
Application Serial No. To be Assigned)	Parent Serial No. 10/072,681
)	
Filed: Herewith)	Parent Filed: February 8, 2002
)	
For: PURIFICATION OF NGF)	Attorney's Docket No. 39766-0037 C3C1
)	
)	Customer No. 25213

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Date Mailed: FEBRUARY 18, 2004

INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. §1.97

Mail Stop Patent Application
Commissioner for Patents
PO Box 1450
Alexandria, Virginia 22313-1450

Sir:

Listed below or on an attached Form PTO-1449 is information known to applicant(s). A copy of each listed publication and U.S. and foreign patent, except for pending U.S. applications, is being submitted herewith, along with a concise explanation of information in a foreign language, if any, pursuant to 37 C.F.R. §1.97-1.98.

Applicants respectfully request that the listed information be considered by the Examiner and be made of record in the above-identified application. If Form PTO-1449 is enclosed, the Examiner is requested to initial and return it in accordance with MPEP §609.

This statement is not intended to represent that a search has been made or that the information cited in the statement is, or is considered to be, material to patentability as defined in §1.56.

☒ This statement qualifies under 37 C.F.R. §1.97, subsection (b) because (check all that apply):

- ☐ (1) It is being filed within 3 months of the application filing date and is other than a continued prosecution application under § 1.53(d)
-- OR --
- ☐ (2) It is being filed within 3 months of entry of a national stage
-- OR --
- ☒ (3) It is being filed before the mail date of the first Office Action on the merits
-- OR --
- ☐ (4) It is being filed before the mailing of a first Office Action after the filing of a request for continued examination under § 1.114.

☐ 37 C.F.R. §1.97(c). If this statement is being filed after the latest of: (1) three months beyond the filing date of a national application; (2) three months beyond the date of entry of the national stage as set forth in §1.491 in an international application; or (3) the mailing date of a first Office action on the merits, but before the mailing date of the earlier of a final office action under §1.113 or a notice of allowance under §1.311, then:

- ☐ a certification as specified in §1.97(e) is provided below; or
- ☐ a fee of \$180.00 as set forth in §1.17(p) is authorized below, enclosed, or included with the payment of other papers filed together with this statement.

☐ 37 C.F.R. §1.97(d). If this statement is being filed after the mailing date of the earlier of a final office action under §1.113 or a notice of allowance under §1.311, but before payment of the issue fee, then:

- A. a certification as specified in §1.97(e) is completed below; and
- B. a petition under 37 C.F.R. §1.97(d) requesting consideration of this statement is submitted herewith; and
- C. a fee of \$130.00 as set forth in §1.17(i)(1) is authorized below, enclosed, or included with the payment of other papers filed together with this statement.

☒ **Fee Authorization.** The Commissioner is hereby authorized to charge the above-referenced fees of \$0.00 and charge any additional fees or credit any overpayment associated with this communication to Deposit Account No. **08-1641 (Attorney's Docket No. 39766-0037 C3C1)**.

Respectfully submitted,

By: 

James A. Fox (Reg. No. 38,455)

Dated: February 18, 2004

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SV 2006472 v1

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT BY APPLICANT (USE SEVERAL SHEETS IF NECESSARY)	ATTY. DOCKET NO. 39766-0037 C3C1	APPLICATION NO. To be Assigned
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U.S. PATENT DOCUMENTS

EXAMINER INITIAL	Ref. No.	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE (IF APPROPRIATE)
	1 *	4,407,744	04.10.83	Young, D.			
	2 *	4,565,785	21.01.86	Gilbert, et al.			
	3 *	4,673,641	16.06.87	George, et al.			
	4 *	4,710,473	01.12.87	Morris			
	5 *	4,738,921	19.04.88	Belagaje, et al.			
	6 *	4,795,706	03.01.89	Hsiung, et al.			
	7 *	5,082,774	21.01.92	Heinrich, et al.			
	8 *	5,169,762	08.12.92	Gray, A.M., et al.			
	9 *	5,210,185	11.05.93	Delli Valle, et al.			
	10 *	5,235,043	10.08.93	Collins, et al.			
	11 *	5,272,063	21.12.93	Chan, H., et al.			
	12 *	5,288,622	22.02.94	Gray, et al.			
	13 *	5,364,769	15.11.94	Rosenthal, A.			
	14 *	5,389,529	14.02.95	Panayotatos, et al.			
	15 *	5,438,121	01.08.95	Barde, et al.			
	16 *	5,453,361	26.09.95	Yancopoulos, G., et al.			
	17 *	5,488,099	30.01.96	Persson, et al.			
	18 *	5,512,661	30.04.96	Shooter, E.M., et al.			
	19 *	5,606,031	25.02.97	Lile, J., et al.			
	20 *	5,639,664	17.06.97	Iwane, M. et al.			
	21 *	5,702,906	30.12.97	Rosenthal, A.			
	22 *	5,705,617	06.01.98	Persson, H., et al.			
	23 *	5,728,803	17.03.98	Urfer, R., et al.			
	24 *	5,733,875	31.03.98	Martin			
	25 *	5,798,448	25.08.98	Caras, I.W., et al.			
	26 *	5,830,858	03.11.98	Rosenthal, A.			

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EXAMINER INITIAL	Ref. No.	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE (IF APPROPRIATE)	
	27 *	5,843,914	01.12.98	Johnson, Jr., E., et al.				
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EXAMINER INITIAL	Ref. No.	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
	28 *	685,490	06.12.95	EPO				
	29 *	450,386 A2	09.10.91	EPO			YES	NO
	30 *	414,151	15.03.95	EPO				
	31 *	121,338	10.10.84	EPO				
	32 *	WO 92/05254	02.04.92	PCT				
	33 *	WO 92/22665	23.12.92	PCT				
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	35 *	WO 95/30686	16.11.95	PCT				
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EXAMINER INITIAL	Ref. No.	OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)						
	37 *	Angeletti, "Nerve Growth Factor from Cobra Venom" <u>Proc. Natl. Acad. Sci. USA</u> 65(3) :668-674 (1970)						
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	39 *	Angeletti, et al. "Purification Characterization, and Partial Amino Acid Sequence" <u>Biochem</u> 15 :26-34 (1976)						
	40 *	Barnett, et al., "Physicochemical Characterization of Recombinant Human Nerve Growth Factor Produced in Insect Cells with a Baculovirus Vector" <u>J. of Neurochemistry</u> 57(3) :1052-1061 (1991)						
	41 *	Belew, et al., "Chick Embryo Nerve Growth Factor" <u>Exp. Cell Res.</u> , 167 :550-558 (1986)						
	42 *	Berkmeier, et al., "Neurotrophin-5: A Novel Neurotrophic Factor That Activates trk and trkB" <u>Neuron</u> 7 :857-866 (November 1991)						
	43 *	Bigon, et al., "Large Scale Purification and Immunological Characterization of Human Placental Nerve Growth" <u>Neurochemical Research</u> 15(12) :1197-1202 (1990)						
	44 *	Bocchini, et al., "The Nerve Growth Factor: Purification as a 30,000-Molecular-Weight Protein" <u>Proc. Natl. Acad. Sci. USA</u> 64 :787-794 (1969)						
	45 *	Bradshaw, "Nerve Growth Factor" <u>Ann. Rev. Biochem.</u> 47 :191-216 (1978)						
	46 *	Bruce, et al., "Production and Characterization of Biologically Active Recombinant Human Nerve Growth Factor" <u>Neurobiology</u> 10 :89-94 (1988)						
	47 *	Buj-Bello, et al., "GDNF Is an Age-Specific Survival Factor for Sensory and Autonomic Neurons" <u>Neuron</u> 15 :821-828 (1995)						
	48 *	Burton, et al., "Activity and Biospecificity of Proteolyzed Forms and Dimeric Combinations of Recombinant Human and Murine Nerve Growth Factor" <u>J. Neurochem.</u> 59(5) : 1937-1945 (1992)						
	49 *	Callegaro, L., et al. "Biological and Immunochemical Properties of Recombinant Human NGF" <u>Trophic Factors and the Nervous System</u> , L. A. Horrocks, et al., New York: Raven Press, Ltd. pps. 75-82 (1990)						

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	53 *	Edwards, et al., "Processing and Secretion of Nerve Growth Factor: Expression in Mammalian Cells with a Vaccinia Virus Vector" <u>Molecular & Cellular Biology</u> 8(6) :2456-2464 (1988)					
	54 *	Ernfors, et al., "Molecular Cloning and Neurotrophic Activities of a Protein With Structural Similarities to Nerve Growth Factor: Developmental and Topographical Expression in the Brain" <u>Proc. Natl Acad. Sci. USA</u> 87 :5454-5458 (July 1990)					
	55 *	Goldstein, et al., "ISOLATION OF HUMAN NERVE GROWTH FACTOR FROM PLACENTAL TISSUE" <u>Neurochemical Research</u> 3 :175-183 (1978)					
	56 *	Hallbook, et al., "Evolutionary Studies of the Nerve Growth Factor Family Reveal a Novel Member Abundantly Expressed in Xenopus Ovary" <u>Neuron</u> 6 :845-858 (May 1991)					
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	58 *	Henerson, et al., "GDNF: A Potent Survival Factor for Motoneurons Present in Peripheral Nerve and Muscle" <u>Science</u> 266 :1062-1064 (1994).					
	59 *	Hohn, et al., "Identification and Characterization of a Novel Member of the Nerve Growth Factor/Brain-derived Neurotrophic Factor Family" <u>Nature</u> 344 :339-341 (March 22, 1990)					
	60 *	Ip, et al., "Mammalian Neurotrophin-4: Structure, Chromosomal Localization, Tissue Distribution, and Receptor Specificity" <u>Proc. Natl. Acad. Sci. USA</u> 89 :3060-3064 (April 1992)					
	61 *	Iwai, et al., "Deoxyribonucleic acids and Related Compounds. XXII. Synthesis of Genes for Human Nerve Growth Factor and Its Fused Protein" <u>Chem. Pharm. Bull.</u> 34(11) :4724-4730 (1986)					
	62 *	Jones, et al., "Molecular Cloning of a Human Gene that is a Member of the Nerve Growth Factor Family" <u>Proc. Natl. Acad. Sci. USA</u> 87 :8060-8064 (1990)					
	63 *	Jongstra-Bilen, et al., "The in vitro processing of the NGF Precursors by the γ -subunit of the 7s NGF complex" <u>Molecular Brain Research</u> 5 :159-169 (1989)					
	64 *	Kahle, et al., "The Amino Terminus of Nerve Growth Factor Is Involved in the Interaction with the Receptor Tyrosine Kinase p140 ^{trkA} " <u>Journal of Biological Chemistry</u> 267(32) :22707-22710 (November 15, 1991)					
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	67 *	Kotzbauer, et al., "Neurturin, a relative of glial-cell-line-derived neurotrophic factor" <u>Nature</u> 384 :467-470 (1996)					
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	70 *	Maisano, et al. "SYNTHESIS OF NEW HYDROPHOBIC ADSORBENTS BASED ON HOMOLOGOUS SERIES OF UNCHARGED ALKYL SULPHIDE AGAROSE DERIVATIVES" <u>Journal of Chromatography</u> , 321 :305-317 (1985)					
	71 *	Maisonpierre, et al., "Neurotrophin-3: A Neurotrophic Factor Related to NGF and BDNF" <u>Science</u> 247 :1446-1451 (March 23, 1990)					
	72 *	Mobley, et al., "Characterization of Isolation of Proteolytically Modified Nerve Growth Factor" <u>Biochemistry</u> 15 :5543-5552 (1976)					
	73 *	Norrgren, et al., "Release of Nerve Growth Factor by Human Glial Cells in Culture" <u>Experimental Cell Research</u> 130 : 31-39 (1980)					
	74 *	Pantazis, "Nerve Growth Factor Synthesized by Mouse Fibroblast Cells in Culture: Absence of α and γ Subunits" <u>Biochemistry</u> 22 :4264-4271 (1983)					

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	75 *	Rosenthal, et al., "Primary Structure and Biological Activity of a Novel Human Neurotrophic Factor" <u>Neuron</u> 4: 767-773 (May 1990)					
	76 *	Rusenko, et al., "Interaction of [¹²⁵ I] Nerve Growth Factor with Acidic Proteins" <u>Neurochemical Research</u> 6(3) :287-300 (1981)					
	77 *	Saboori, et al., "Nerve Growth Factor: Biosynthetic Products of the Mouse Salivary Glands. Characterization of Stable High Molecular Weight and 32,000-Dalton Nerve Growth Factors" <u>Biochemistry</u> 25 :5565-5571 (1986)					
	78 *	Schmelzer, et al. "Biochemical Characterization of Recombinant Human Nerve Growth Factor" <u>Journal of Neurochemistry</u> 59(5) :1675-1683 (1992)					
	79 *	Scott, et al., "Isolation and nucleotide sequence of a cDNA encoding the precursor of mouse nerve growth factor" <u>Nature</u> 302 :538-540 (1983)					
	80 *	Shih, et al., "Mutagenesis Identifies Amino-terminal Residues of Nerve Growth Factor Necessary for Trk Receptor Binding and Biological Activity" <u>Journal of Biological Chemistry</u> 269 :27679-27686 (1994)					
	81 *	Suda, et al., "Nerve Growth Factor in Mouse and Rat Serum: Correlation Between Bioassay and Radioimmunoassay Determination" <u>Proc. Natl. Acad. Sci. USA</u> 75(8) :4042-4046 (1978)					
	82 *	Ulrich, et al., "Human β -Nerve Growth Factor Gene Sequence Highly Homologous to That of Mouse" <u>Nature</u> 303 :821-825 (June 1983)					
	83 *	Ulrich, et al., "Sequence Homology of Human and Mouse B-NGF Subunit Genes" <u>Symp. on Quan. Biol.</u> 48 :435-442 (1983)					
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	85 *	Varon, et al., "The Isolation of the Mouse Nerve Growth Factor Protein in a High Molecular Weight Form" <u>Biochemistry</u> 6(7) :2202-2209 (1967)					
	86 *	Walker, et al., "Human Nerve Growth Factor: Lack of Immunocross-activity with Mouse Nerve Growth Factor" <u>Life Sciences</u> 26 :195-200 (1980)					

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